



# THE ARGOS DATA COLLECTION AND LOCATION SYSTEM

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**Service Argos, Inc.**

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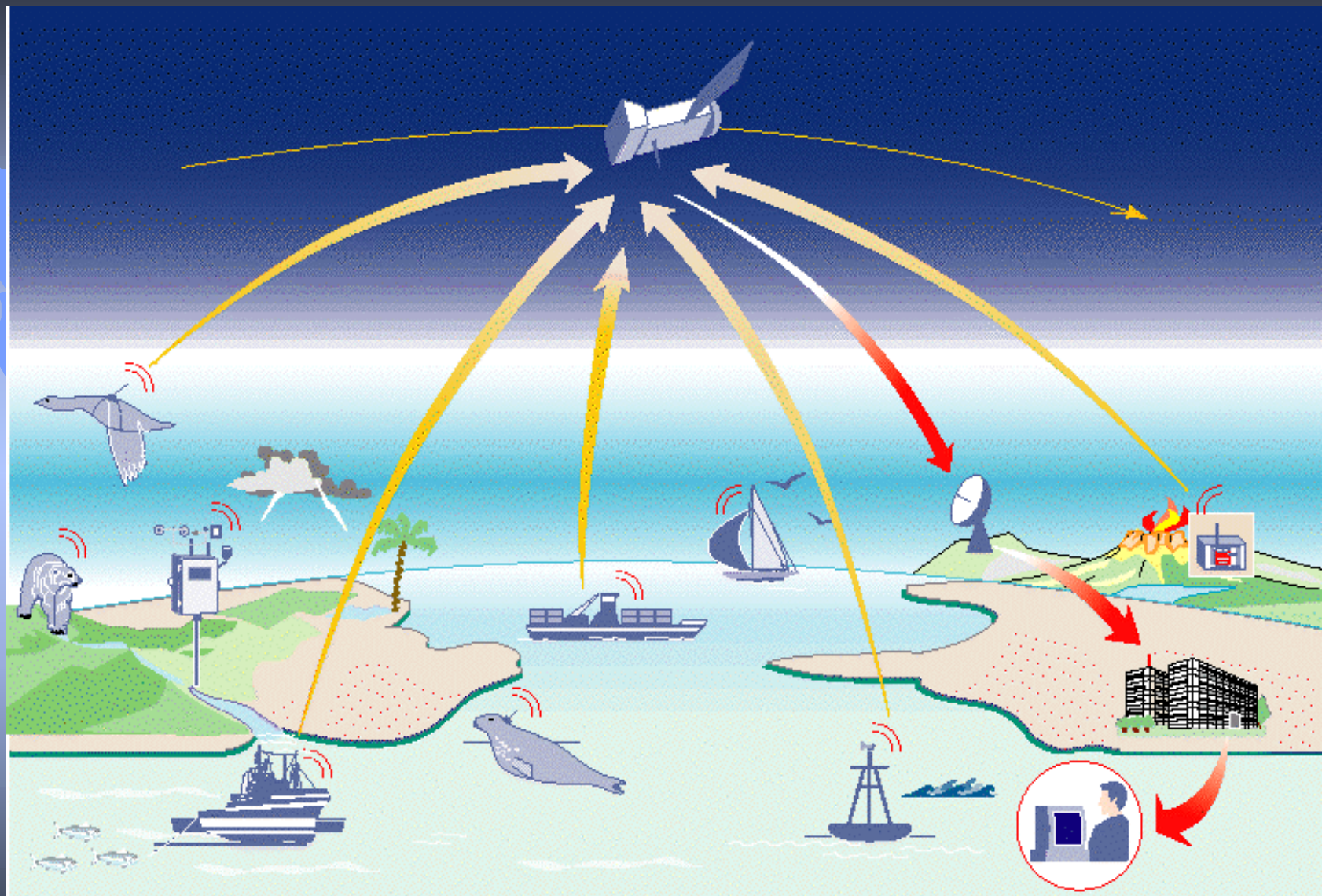
2004 Satellite Direct Readout Conference, December 6-10, 2004



# **TODAY'S PRESENTATION**

- ▶ **THE ARGOS DCS**
- ▶ **UNIQUE FEATURES & SYSTEM COMPONENTS**
- ▶ **APPLICATIONS**
- ▶ **DIRECT READOUT**

# THE ARGOS DCS



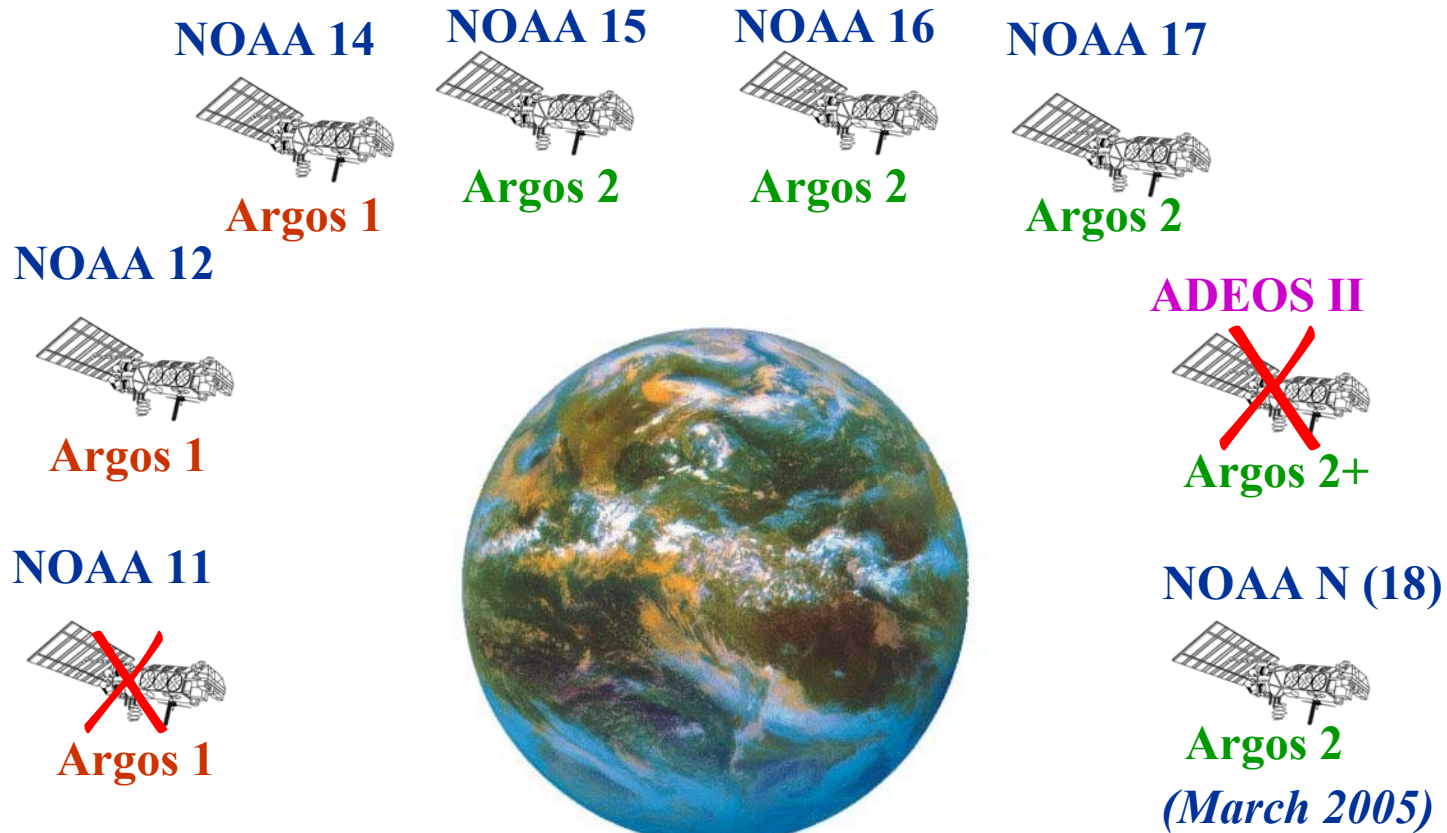
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# **ARGOS UNIQUE FEATURES**

- **NOAA-CNES Cooperative Program for 25+ Years**
- **On-board Receiver Sensitivity is High**
- **Argos Location by Doppler Calculation**
- **Simple , Inexpensive Transmitters**
- **2-Way plus High Data Rate (soon with METOP, N' &...)**
- **Strong International Cooperation – Joint Tariff Agreement**
- **Steady Decrease in JTA Rates**

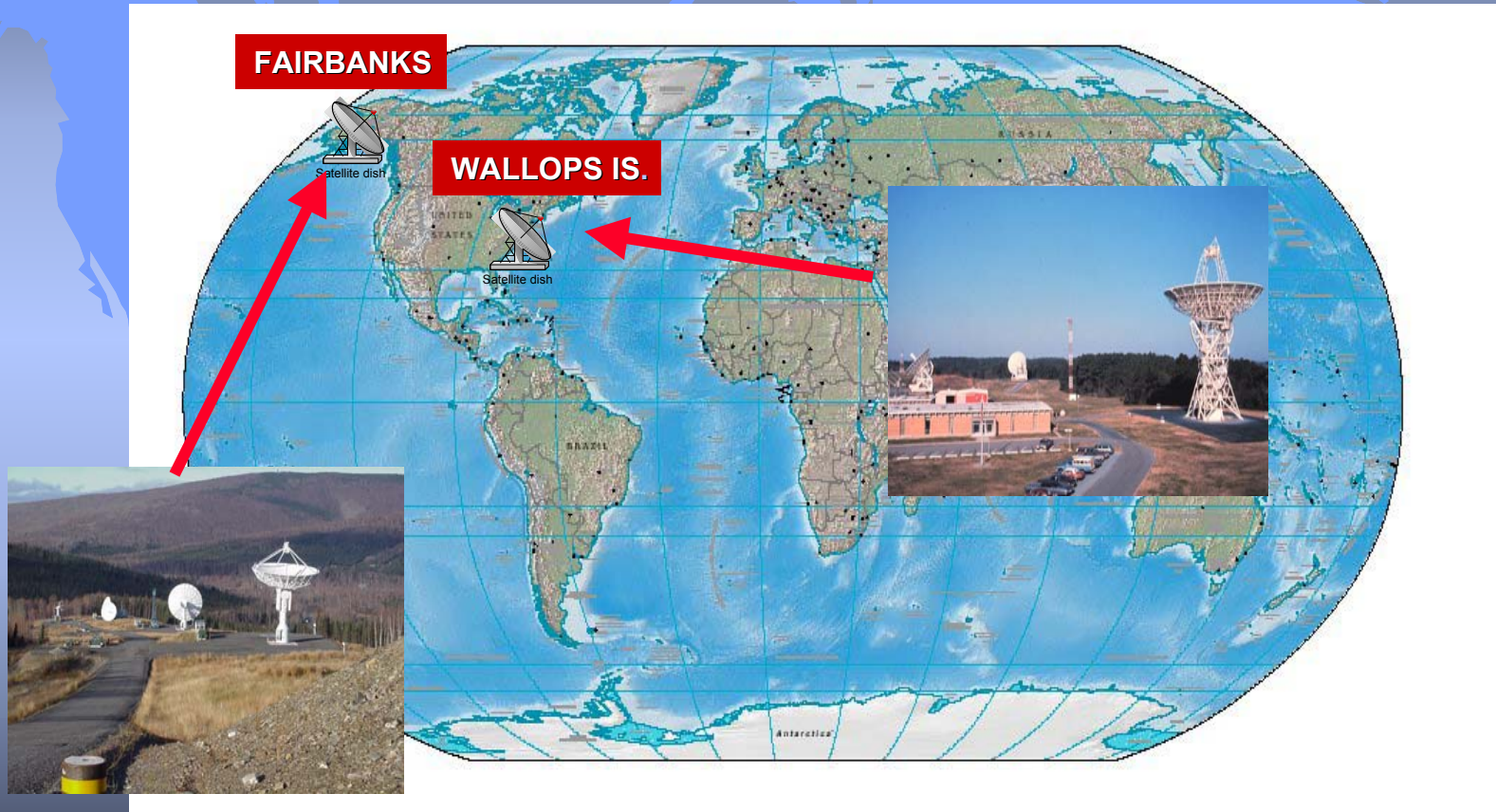


# Argos Space Segment



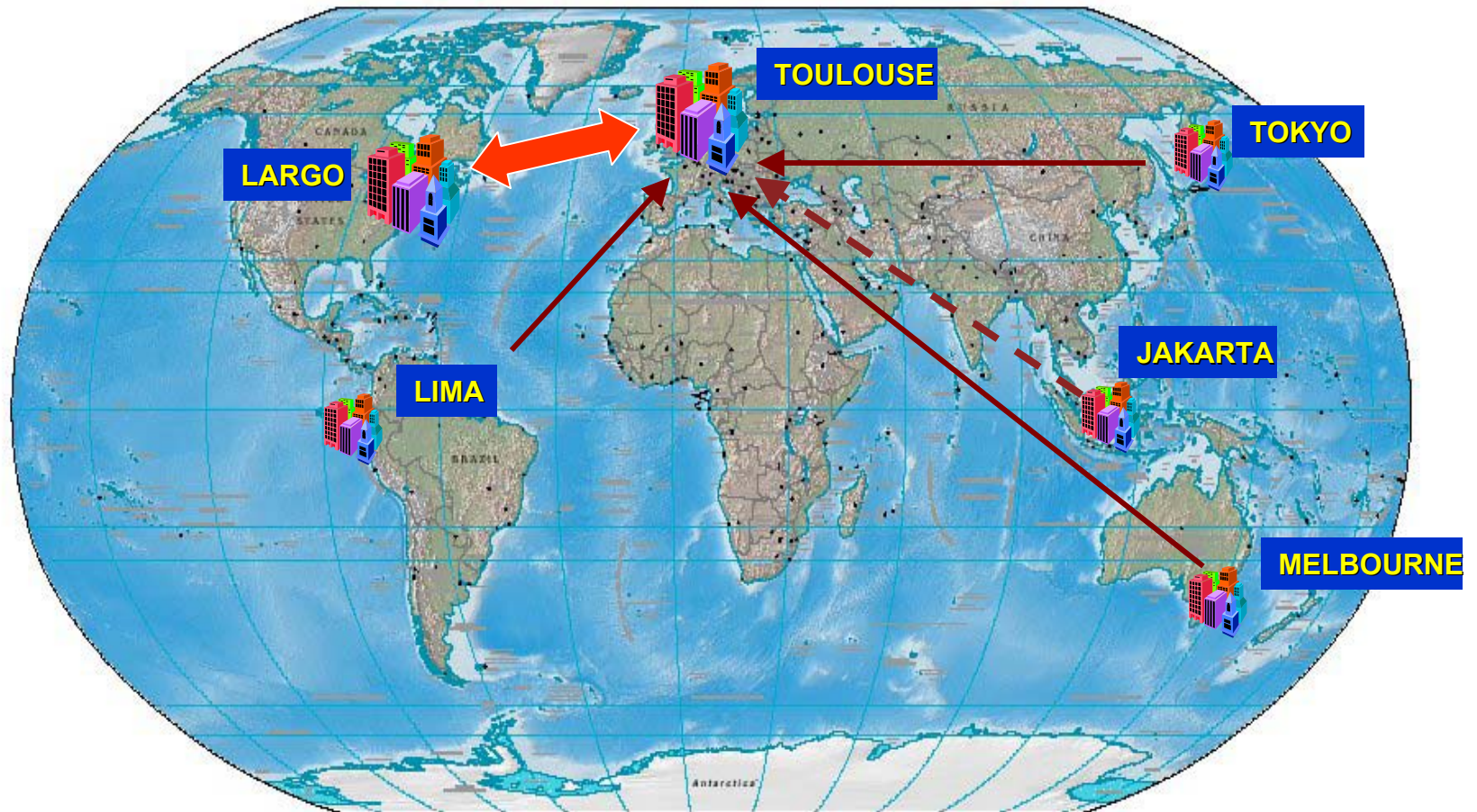
# GROUND RECEIVING STATIONS

## ➤ GLOBAL (Stored Data)

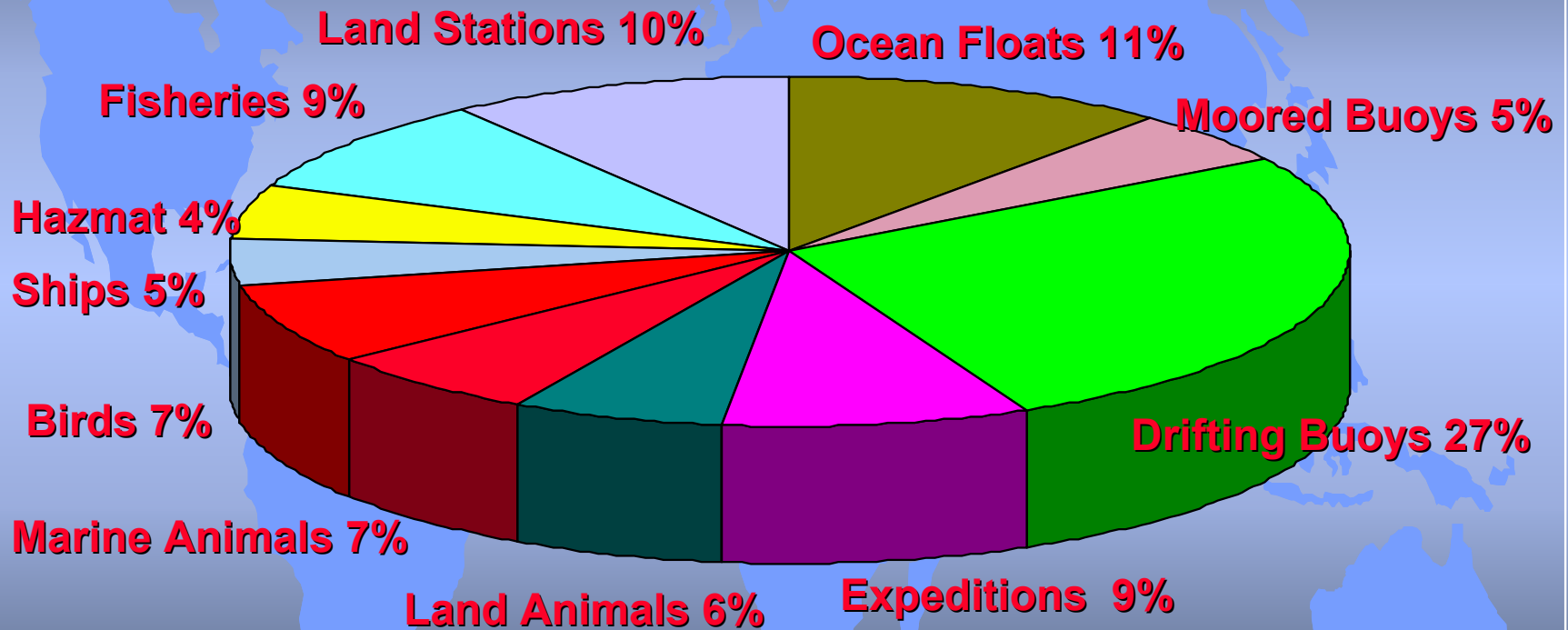




# ARGOS PROCESSING CENTERS

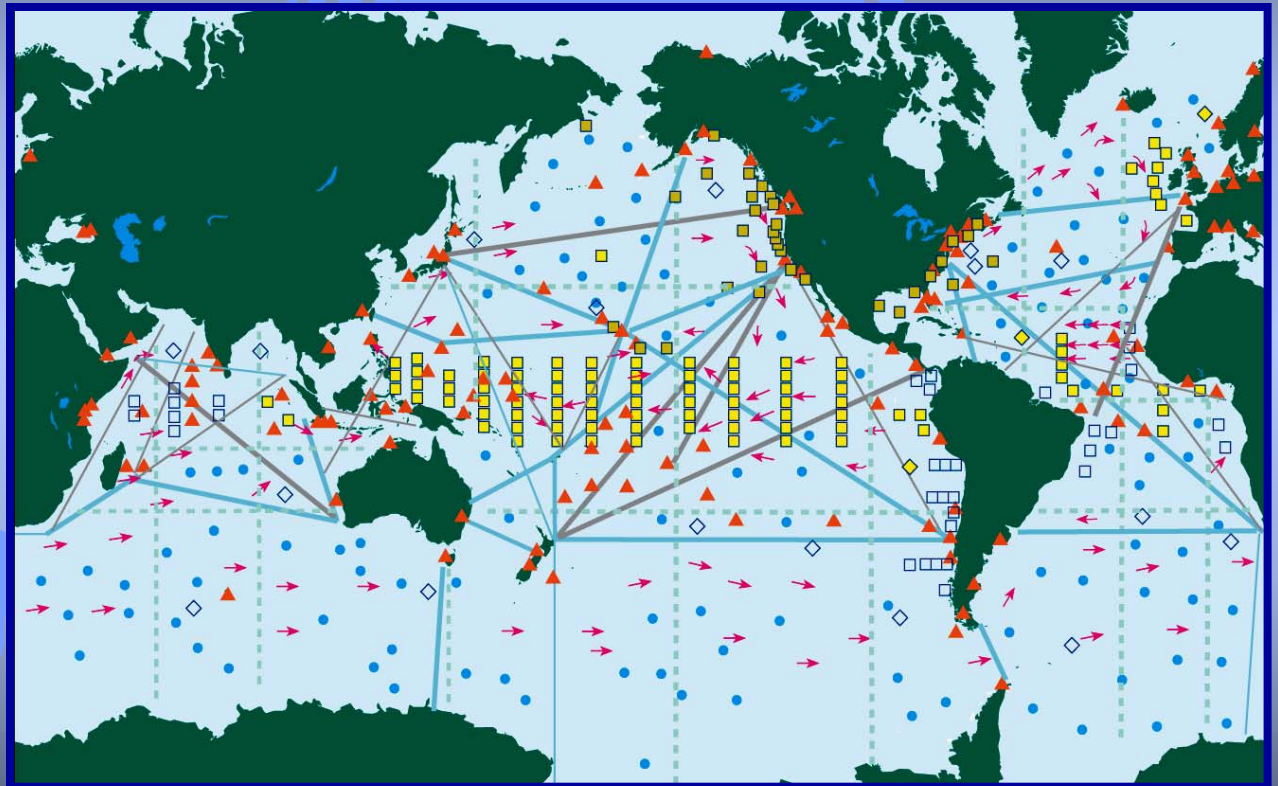


# Argos Data Applications



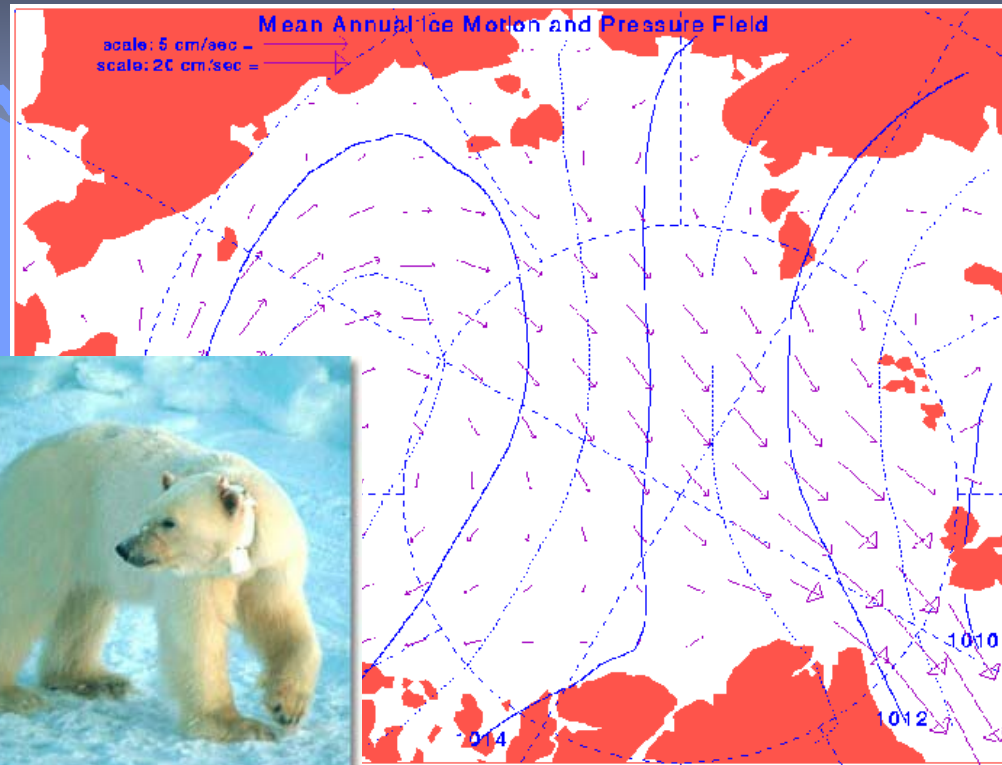


# Ocean Climate Observations



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# Arctic Operations



- ◆ Argos ice buoys monitor weather and ice motion to support arctic operations and research.

# Wildlife Monitoring



- ◆ **Argos micro-transmitters (15-20g) permit wildlife management of animals, fish and birds as small as puffins (600g).**



# Vessel Monitoring Systems



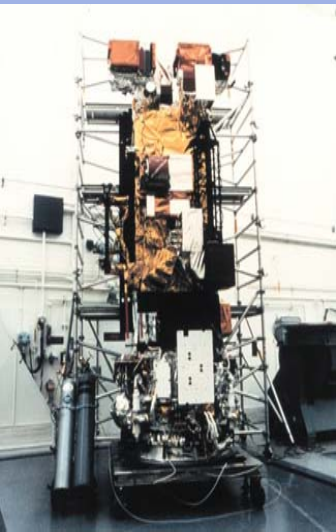
## ◆ Countries using Argos VMS

- Russia
- Peru
- Japan
- USA
- Panama
- Korea
- Senegal
- Norway
- Chile
- France
- Indonesia
- So. Africa



# Argos International Cooperation

- NOAA and CNES cooperative program since early 1970's
- Developed to fill technological need for scientific data retrieval.
- Oversight by Argos Operations Committee (OPSCOM) co-chaired by NOAA and French Space Agency (CNES).
- NOAA responsible for:
  - Spacecraft integration, launch and operation
  - Providing access to global pre-processed data stream
- CNES responsible for:
  - Providing Argos instrument
  - Operation of Argos data processing system



2004 Satellite Director

November 6-10, 2004



# DIRECT READOUT

## REGIONAL (R/T Data)



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# REGIONAL STATIONS RECEIVING TIP DATA



	Antennas	Country	Operator	Satellites
1	Antartica	Chile	Meteo Chile	, , N15, N14, N12
2	Athenes	Greece	CLS	N17, N16, N15, N14, N12
3	Aussaguel	France	CLS	N17, N16, N15, N14, N12
4	Buenos Aires	Argentina	INTA	N16, N15, , N14, N12
5	Cape Town	South Africa	CLS/SAWB	N17, N16, N15, N14, N12
6	Casey	Australia (Antarctica)	BOM	, N16, N15, N14, N12
7	Cayenne	France (Guyana)	IRD	, N16, N15, N14, N12
8	Darwin	Australia	BOM	, N16, N15, N14, N12
9	Edmonton	Canada	Envir. Canada	N17, N16, , N14, N12
10	Fidji	Fidji	FMS	, , N15, N14,
11	Gilmore	USA	NOAA/NESDIS	N17, N16, N15, N14, N12
12	Halifax	Canada	Can. Coast Guard	N17, N16, N15, N14, N12
13	Hatoyama	Japan	NASDA/EOC	, N16, N15, N14, N12
14	Hawaï	USA	NOAA/NWS	, , , N14, N12
15	Helsinki	Finland	CLS	N17, N16, N15, N14, N12
16	Ile de la Réunion	France (Reunion Island)	Météo France	, N16, , N14,
17	Ile de la Réunion	France (Reunion Island)	IRD	, N16, N15, N14, N12
18	Lannion	France	Météo France	, N16, N15, N14,
19	Largo	USA	SAI	N17, N16, N15, N14, N12
20	Las Palmas	Canaries Island	Univ. Las Palmas	, N16, N15, N14, N12
21	Las Palmas	Canaries Island	CLS	N17, N16, N15, N14, N12
22	Lima	Peru	CLS perù	N17, N16, N15, N14, N12
23	Melbourne	Australia	BOM	, N16, N15, N14, N12
24	Miami	USA	NOAA/AOML	N17, N16, N15, N14, N12
25	Monterey	USA	NESDIS/NWS	, N16, , , N12
26	Murmansk	Russia	Complex System	, N16, N15, N14, N12
27	Noumea	France (New Caledonia)	IRD	, N16, , N14, N12
28	Oslo	Norway	NMI	, N16, N15, N14, N12
29	Perth	Australia	BOM	, N16, N15, N14, N12
30	Petropavlosk	Russia	Rybradiov	, N16, N15, N14, N12
31	Punta Arena	Chile	Meteo Chile	, , N15, N14, N12
32	Riyad	Saudi Arabia	CACST	N17, N16, N15, N14, N12
33	Santiago	Chile	Meteo Chile	, , N15, N14, N12
34	Singapore	Singapore	NEA	, N16, N15, N14, N12
35	Sondre	Greenland	DMI	N17, N16, N15, N14, N12
36	Tokyo	Japan	Jamstec	, N16, N15, N14, N12
37	Toulouse	France	CLS	N17, N16, N15, N14, N12
38	Tromsø	Norway	KSAT	N17, N16, N15, N14, N12
39	Wallops	USA	NOAA/NESDIS	N17, N16, N15, N14, N12
40	Wellington	New-Zeland	Met Office	, N16, N15, ,

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Government	Percentage
Current government	85%
Previous government	15%

Response	Percentage
Yes, the president is a threat to the country	85%
No, the president is not a threat to the country	15%



# **BENEFITS TO ARGOS USERS FROM DIRECT READOUT DATA**

- ✓ **ARGOS OPERATES IN A 'BENT-PIPE' MODE FOR PLATFORMS COLLOCATED WITH AN LUT IN THE SATELLITE FOOTPRINT**
- ✓ **USER GETS DATA IN REAL-TIME (minutes)**
- ✓ **ELIMINATES STORED DATA DELAYS esp. FOR BLIND ORBITS**
- ✓ **PARTICULARLY IMP. FOR PERISHABLE OCEAN/MET DATA**



